The Examiner has objected that throughout the application trademarks are used without being capitalized and without having corresponding generic terminology.

With the present amendments the trademarks have been capitalized and indicated as being trademarks. It is noted, in addition, the source of the trademarked products has been indicated and the general nature of each product is evident from the text. It is believed this meets the requirements for use of trademarks in patent applications.

Claims 24, 25, 27 and 30 are objected to because *Dictyocaulus viviparus* is mispelled.

The spelling of *Dictyocaulus viviparus* is now corrected in accord with the helpful suggestion of the Examiner.

Claim 20 is rejected under 35 USC 112, first paragraph, for lack of enablement. The Examiner has commented that the specification, while enabling for the amino acid sequence of SEQ ID NO:30, does not enable "a part thereof."

Claim 20 has been amended to recite an immunogenic protein according to claim 17, comprising the amino acid sequence SEQ ID NO:30 or an immunogenic part thereof. It is believed that the ordinary practitioner in the art at the time the application was filed would have been able to identify the immunogenic portions of the claimed protein through conventional means at the time the application was filed, including, among various methods, using antisera

from cattle immunized with Applicants' DV 17 protein. It is believed that the skill in the art, the discussion on pages 3 and 4 of the specification, and the provision of the actual sequence in Table 6 provide the skilled practitioner with all the information necessary to identify the immunogenic parts of the protein having the amino acid sequence defined in SEQ ID NO:30. Amino acid sequences that are part of DV 17 are referenced in the specification, such as in the second paragraph of page 4, and in the original claims. Moreover, extraction and methods for isolating proteins are taught in the present specification. Identifying proteins using sera from infected animals and isolating and purifying protein fractions is disclosed, for example, in the second full paragraph on page 7. Western blots identifying proteins using immune sera are also disclosed in Example 5 beginning on page 9. Should the Examiner wish, references teaching various techniques available for identifying immunogenic portions of proteins that were in the art at the time the present application was filed, such as the PEPCEAN method, illustrating the knowledge in the art at the time of filing, will be provided.

Claim 23, stands rejected under 35 USC 112, first paragraph, for lack of enablement. The Examiner concluded that the specification is not enabling for "parts" of SEQ ID NO:29.

Claim 23 has been amended to recite an isolated nucleic acid comprising SEQ ID NO:29 or a nucleic acid that hybridizes to SEQ ID NO:29 under stringent conditions. Stringent conditions are specifically defined in the

specification on page 7, in the third paragraph. It is believed that the skilled practitioner at the time this application was filed would fully understand how to produce an isolated nucleic acid that hybridizes with SEQ ID NO:29 under stringent conditions, as defined.

Claims 24 and 25 stand rejected under 35 USC 112, first paragraph, for lack of enablement for including the terms "parts thereof."

Claims 24 and 25 have been amended to recite "parts thereof that hybridize with a sequence of the group under stringent conditions..." For the reasons set forth above, it is believed that including the limitation of stringent conditions, as defined in the specification, render these claims fully enabled.

Claims 20 and 23-26 stand rejected under 35 USC 112, second paragraph, for being indefinite. Claim 20 is objected for use of the term "parts thereof." The Examiner objected that biological/immunological properties should be defined.

It is believed that with the present amendments making claim 20 dependent on claim 17 and defining the "parts therof" as being necessarily immunogenic, this objection is overcome.

Claim 23 is also said to be indefinite for use of the term "parts thereof."

It is believed that the rejection to claim 23 is overcome by the present amendment replacing "parts thereof" with a nucleic acid that hybridizes under stringent conditions with the specified sequence. Sequences that are too short or that have a different sequence will not hybridize under stringent conditions and are, therefore, excluded by the limitation of the claim.

Claims 24 and 25 are also objected to for being indefinite by use of the term "parts thereof."

Claims 24 and 25 have now been amended to recite that the "parts" hybridize with a defined sequence under stringent conditions. It is well within the skill in the art to determine whether a selected sequence meets that definition.

Claim 26 stands rejected for being indefinite in the use phrase "expressing the cDNA clone obtained according to claim 24...."

The rejection of claim 26 is believed to be overcome with the present amendment to claim 24.

Claims 17-20 and 29-31 stand rejected under 35 USC 102(b) for anticipation or, alternatively, under 35 USC 103(a) for being obvious over de Leeuw et al. de Leeuw et al. is said to disclose an immunogenic protein of *Dictyocaulus viviparus* with a molecular weight of 17,000 daltons. The Examiner concluded that Applicants' claim limitations reasonably appear to be the identification of new features of a protein already known in the art.

Submitted herewith is a Declaration by Mr. Hofmann, the inventor, concerning the publications by de Leeuw, as well as by Britton and Schneider. He reports that, with respect to de Leeuw et al., he had received a personal communication from Thomas Schneider, an author of another of the cited references, reporting that the 17kd protein disclosed by de Leeuw et al. and the 18kd protein disclosed by Schneider both react with the same monoclonal antibody. And given the specificity of monoclonal antibodies, the 17kd protein of de Leeuw et al. and the 18kd protein of Schneider must be similar proteins and, therefore, must be different from the presently claimed proteins. As reported by Mr. Hofmann, Schneider had informed him in personal communications that the Schneider et al. 18kd protein had no relation to the presently claimed DV17 protein because its sequence differs completely from that of DV17.

Claims 17-26 and 31-34 stand rejected under 35 USC 102(b) for anticipation or, alternatively, under 35 USC 103(a) for obviousness over Britton et al.

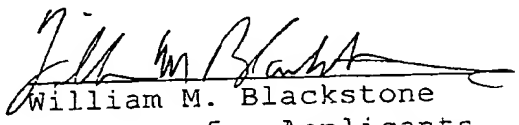
The rejection over Britton et al. is respectfully traversed. Their sequence, given in Figure 1(A) on page 79 is not the same as DV 17, as disclosed in SEQ ID NO:30 of the present application. Accordingly, it can neither anticipate nor render obvious the presently claimed invention.

Claims 17-26 and 29-34 stand rejected under 35 USC 102(b) for anticipation or, alternatively, under 35 USC 103(a) for obviousness over Schneider.

The rejection over Schneider is respectfully traversed. As mentioned above and in the accompanying Declaration, Mr. Hofmann has been informed by Mr. Schneider that the Schneider sequence referenced in the cited publication is different from the sequence presently claimed.

In view of the above, it is believed that claims 17-26 and 29-34 are in condition for allowance. Favorable action is solicited. Should the Examiner believe that a conference would be helpful in advancing the prosecution of this application, he is invited to telephone Applicants' Attorney at the number below.

Respectfully submitted,



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41HOFMANN-AMENDMENT

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20. (Amended) [An isolated] The immunogenic protein according to claim 17, comprising the amino acid sequence of SEQ ID NO:30, or an immunogenic [a] part thereof.

23. (Amended) [The] An isolated nucleic acid, [according to claim 21, which (a) comprises] comprising SEQ ID NO:29[, or parts thereof, or (b)] or a nucleic acid that hybridizes, under stringent conditions, with a nucleotide sequence according to [(a)] SEQ ID NO:29.

24. (Amended) A method for identifying a cDNA clone which comprises an isolated nucleic acid sequence according to claim 21, the method comprising:

(a) [obtain] obtaining a radioactively or nonradioactively labeled oligonucleotide molecule having a sequence selected from the group consisting of SEQ ID NO:8; SEQ ID NO:9; SEQ ID NO:10; SEQ ID NO:11; SEQ ID NO:12; SEQ ID NO:13; and SEQ ID NO:14, or parts thereof that hybridize with a sequence of the group under stringent conditions; and

(b) screening a cDNA library prepared from [*Dictuocaulus*] *Dictyocaulus viviparus* using the labeled oligonucleotide molecule.

25. (Amended) A method for identifying a cDNA clone which comprises an isolated nucleic acid sequence according to claim 21, the method comprising:

(a) [obtain] obtaining a polymerase chain reaction primer having a sequence selected from the group consisting of SEQ ID NO:8; SEQ ID NO:9; SEQ ID NO:10; SEQ ID NO:11; SEQ ID NO:12; SEQ ID NO:13; and SEQ ID NO:14, or parts

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

thereof that hybridize with a sequence of the group under stringent conditions; and

(b) screening a cDNA library or RNAs prepared from [*Dictuocaulus*] *Dictyocaulus viviparus* using the primer.